AMENDMENTS TO THE CLAIMS

1.　(Currently amended) A method for inspecting [[an]] a camera image of a workpiece acquired by a machine vision inspection system, the machine vision inspection system having a camera that provides the camera image and a user interface usable to define a sequence of operations usable to inspect the camera image, the method comprising:

acquiring [[an]] a camera image including an extraneous feature having an extraneous edge located proximate to an edge feature to be inspected;

defining a region of interest in the camera image, the region of interest associated with [[a]] an edge location video tool provided by the user interface, the edge location video tool having one or more associated edge locating operations;

identifying extraneous feature pixels corresponding to the extraneous feature at least in the region of interest; and

performing the one or more edge locating operations associated with the video tool ， excluding to locate the edge feature to be inspected, the edge locating operations including analyzing camera image data in the region of interest, wherein:

the identified extraneous feature pixels are excluded from at least one operation camera image data analyzed by the edge locating operations associated with the video tool, at least in the region of interest and

the camera image data analyzed by the edge locating operations associated with the video tool are not modified before being analyzed by the edge locating operations associated with the video tool.

2.　(Currently amended) The method of Claim 1, wherein the extraneous feature comprises at least one of a) a grid-like feature, and b) a grid-like feature of a flat panel display

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~~screen mask~~ a first normal workpiece feature that occurs as a foreground object in the camera image such that it occludes a second normal workpiece feature that occurs as a background object in the camera image, the second normal workpiece feature including the edge feature to be inspected.

3. (Currently amended) The method of Claim [[1]] 2, wherein ~~image data corresponding to pixels in the region of interest that are not the identified extraneous feature pixels are not modified before performing the one or more operations associated with the video tool~~ the extraneous feature comprises at least one of a) a grid-like feature, and b) a grid-like feature of a flat panel display screen mask.

4. (Original) The method of Claim 1, wherein identifying extraneous feature pixels at least in the region of interest comprises:

identifying a first set of pixels estimated to correspond to the extraneous feature;

determining a second set of pixels that comprise a buffer region adjacent to at least some of the pixels of the first set; and

including pixels corresponding to the first and second sets in the identified extraneous feature pixels.

5. (Original) The method of Claim 4, wherein determining the second set of pixels comprises performing at least one dilation operation on the first set of pixels.

6. (Original) The method of Claim 1, wherein the extraneous feature pixels are identified only in the region of interest.

7. (Currently amended) The method of Claim 1, wherein the user interface includes at least one extraneous feature mode widget that is usable for at least one of a) initiating a mode

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of operation of the machine vision inspection system wherein operations usable to identify extraneous feature pixels are activated, and b) indicating at least an "on" status of a mode of operation of the machine vision inspection system wherein operations usable to identify extraneous feature pixels are activated.

8.   (Currently amended) The method of Claim 7, wherein the user interface includes at least one extraneous feature mode widget that is usable to ~~suspend~~ deactivate the mode of operation of the machine vision inspection system wherein the operations usable to identify extraneous feature pixels are ~~activated~~ active.

9.   (Currently amended) The method of Claim 7, wherein defining a region of interest comprises defining the region of interest using a graphical region of interest indicating widget of the video tool, and the at least one extraneous feature mode widget is associated with the video tool and ~~the at least one feature~~ comprises at least one of a) a mode status indicating ~~feature~~ widget and b) a mode control widget.

10.   (Original) The method of Claim 1, wherein identifying extraneous feature pixels at least in the region of interest comprises using thresholding techniques to identify regions corresponding to extraneous feature pixels and morphology techniques to filter anomalous portions of the boundaries of the identified regions.

11.   (Currently amended) The method of Claim 1, wherein identifying extraneous feature pixels at least in the region of interest comprises:

determining a template of at least a portion of the extraneous feature;

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performing correlation operations based on the template and an inspection image, and identifying at least one correlation peak location that corresponds to a feature in the inspection image that at least approximately matches the template;

characterizing a nominal geometric feature corresponding to at least one portion of the extraneous feature based on a priori knowledge of the workpiece;

locating the nominal geometric feature ~~in an appropriate manner~~ relative to the at least one correlation peak location; and

identifying pixels corresponding to the located nominal geometric feature as extraneous feature pixels.

12.   (Original) The method of Claim 1, wherein the machine vision inspection system includes a mode of operation wherein operations usable to identify extraneous feature pixels are activated, and the user interface comprises at least one control widget usable to activate the mode of operation.

13.   (Original) The method of Claim 12, wherein the machine vision inspection system includes predetermined extraneous feature pixel identification operations, and the user interface includes features usable by an operator to determine at least one of S1) at least one subset of the predetermined extraneous feature pixel identification operations to be applied to an image, and S2) at least one parameter that governs a predetermined extraneous feature pixel identification operation to be applied to an image, and identifying extraneous feature pixels at least in the region of interest comprises an operator selecting at least one of S1) and S2).

14.   (Original) The method of Claim 13, wherein identifying extraneous feature pixels at least in the region of interest comprises:

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identifying a set of extraneous feature pixels according to the operator selection of at least one of S1) and S2);

providing a display of the identified set of extraneous feature pixels superimposed at their proper locations on at least a portion of the original inspection image such that they are easily distinguished; and

the operator approving the identified set of extraneous feature pixels based on the display, wherein the operator approval takes place prior to performing the one or more operations associated with the video tool.

15.   (Original) The method of Claim 14, wherein the method is performed during a training mode of operation of the machine vision inspection system and when the operator approval takes place prior to performing the one or more operations associated with the video tool, machine control instructions corresponding to the operator selection of at least one of S1) and S2) are in a part program for automatically inspecting the workpiece.

16.   (Original) The method of Claim 1, wherein a first set of operations used for identifying extraneous feature pixels at least in the region of interest are performed prior to beginning a second set of operations used for performing the one or more operations associated with the video tool.

17.   (Canceled)

18.   (Currently amended) A machine vision inspection system usable for acquiring and inspecting a camera image of a workpiece images that include , wherein the camera image includes an extraneous features feature having an extraneous edge located proximate to an edge feature to be inspected, the machine vision inspection system comprising:

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a user interface usable to define a set of operations usable to inspect [[a]] the camera image of the workpiece image that includes the extraneous feature and the edge feature to be inspected, the user interface including an edge location video tool;

an image acquisition portion comprising a camera usable for acquiring [[a]] the camera image of the workpiece image that includes [[an]] the extraneous feature and the edge feature to be inspected;

a region of interest defining portion usable to define a respective region of interest in the acquired camera image, the respective region of interest corresponding to a respective the edge location video tool of a type provided by the user interface, the edge location video tool having one or more associated edge locating operations, the edge locating operations including analyzing camera image data in the region of interest; and

an extraneous feature identifying portion usable to identify extraneous feature pixels corresponding to the extraneous feature at least in the respective region of interest,

wherein, when the extraneous feature identifying portion is used to identify extraneous feature pixels at least in the respective region of interest of the workpiece camera image, the machine vision inspection system is operable operates to perform the one or more operations associated with the respective video tool and exclude the identified extraneous feature pixels from at least one operation the camera image data analyzed by the edge locating operations associated with the video tool, and the camera image data analyzed by the edge locating operations associated with the video tool are not modified before being analyzed by the edge locating operations associated with the video tool.

19.   (Currently amended) The machine vision inspection system of Claim 18, wherein when the extraneous feature identifying portion is used to identify extraneous feature pixels corresponding to the extraneous feature included in the respective region of interest, the machine

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vision inspection system automatically excludes the identified extraneous feature pixels from ~~at least one operation~~ the camera image data analyzed by the edge locating operations associated with the ~~respective~~ video tool.

20.   (Original) The machine vision inspection system of Claim 18, wherein the user interface includes at least one feature that is usable for at least one of a) initiating a mode of operation of the machine vision inspection system wherein operations usable to identify extraneous feature pixels are activated, and b) indicating at least an "on" status of a mode of operation of the machine vision inspection system wherein operations usable to identify extraneous feature pixels are activated.

21.   (Currently amended) The machine vision inspection system of Claim 20, wherein the region of interest defining portion is usable to define the respective region of interest based on a graphical operator-configurable region of interest indicating widget corresponding to the respective video tool, and the at least one feature that is usable for at least one of a) and b) ~~is associated with the respective video tool and the at least one feature~~ comprises at least one of [[a)]] a mode status indicating ~~feature~~ widget associated with the respective video tool and [[b)]] a mode control widget associated with the respective video tool.

22.   (Currently amended) The ~~method~~ machine vision inspection system of Claim 18, wherein the extraneous feature identifying portion comprises predetermined extraneous feature pixel identification operations, and the user interface includes features usable by an operator to determine at least one of S1) at least one subset of the predetermined extraneous feature pixel identification operations, to be applied to the ~~workpiece~~ camera image of the workpiece, and S2) at least one parameter that governs a predetermined extraneous feature pixel identification operation to be applied to ~~a workpiece~~ the camera image of the workpiece, and the extraneous

feature identifying portion identifies extraneous feature pixels based on the operator determination of at least one of S1) and S2).

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